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| APPLICATION NO.                        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/762,949                             | 01/21/2004  | Jay Rossiter         | 50277-2430          | 5968             |
| 42425                                  | 7590        | 01/13/2006           | EXAMINER            |                  |
| HICKMAN PALERMO TRUONG & BECKER/ORACLE |             |                      | ALAM, SHAHID AL     |                  |
| 2055 GATEWAY PLACE                     |             |                      | ART UNIT            |                  |
| SUITE 550                              |             |                      | PAPER NUMBER        |                  |
| SAN JOSE, CA 95110-1089                |             |                      | 2162                |                  |

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/762,949 | <b>Applicant(s)</b><br>ROSSITER ET AL. |  |
|                              | <b>Examiner</b><br>Shahid Al Alam    | <b>Art Unit</b><br>2162                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11,16-26,31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11,16-24,26,31 and 33 is/are rejected.
- 7) ☒ Claim(s) 10 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11172005</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1 – 11, 16 – 26 and 31 – 34 are pending in this Office action.

### *Response to Arguments*

2. Applicant's argues that the prior art of record does not teach the added portion "wherein modifying the general purpose operating system includes removing one or more features of the general purpose operating system that are not required to provide said set of services to the database server" are not persuasive because **Schleipfer** strongly teaches this limitation (see page 124, right hand column, 4<sup>th</sup> paragraph and further see the abstract).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**4. Claims 1, 3, 5 – 9, 11, 16 – 18, 20 – 24, 26, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 5,606,693 issued to Kenneth Nilsen et al. (“Nilsen”) and in view of “The ServOS Kernel” by Stefan Schleipfer (“Schleipfer”).**

With respect to claim 1, Nilsen teaches a database appliance, comprising: a database server; and an operating system, generated by modifying a general purpose operating system, whose configuration is dictated based on a set of services required by the database server (see abstract, column 2, lines 15 – 35) and wherein the operating system is installed on and executed by the database appliance (column 3, lines 50 – 65).

Nilsen does not explicitly teach the special purpose operating system and the general purpose operating system as claimed.

Schleipfer discloses claimed special purpose operating system and the general purpose operating system (see abstract).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Schleipfer with Nilsen to increase the ease and efficiency of the configuration management task in a distributed computer systems. The ServOS kernel of Schleipfer takes simpler solutions where problems are easier to solve on server machines and it further gives the server modules a higher-level OS support (see page 121; Schleipfer).

The Language in claim 1, “wherein modifying the general purpose operating system includes removing one or more features of the general purpose operating system that are not required to provide said set of services to the database server” is a recitation of an intended use in a claim directed to an Apparatus. Such language suggests that the method step be performed but does not actually require the step to be performed because the claimed invention is not directed to a method. As a result, it carries no patentable weight (see MPEP 2106 [R – 3]. II.C subsection c).

With respect to claim 16, Nilsen teaches a method for constructing a database appliance, comprising: a database server; and an operating system, generated by modifying a general purpose operating system, whose configuration is dictated based on a set of services required by the database server (see abstract, column 2, lines 15 – 35) and wherein the operating system is installed on and executed by the database appliance (column 3, lines 50 – 65).

Nilsen does not explicitly teach the special purpose operating system and the general purpose operating system and that the general purpose operating system that are not required to provide said set of services to the database server as claimed.

Schlepfer discloses claimed special purpose operating system and the general purpose operating system (see abstract) and the general purpose operating system that are not required to provide said set of services to the database server (page 124, right hand column, lines 26 – 29).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Schlepfer with Nilsen to increase the ease and efficiency of

the configuration management task in a distributed computer systems. The ServOS kernel of Schleipfer takes simpler solutions where problems are easier to solve on server machines and it further gives the server modules a higher-level OS support (see page 121; Schleipfer).

With respect to claim 2, the Language, “wherein the database server was generated from another database server **by modifying the code** of the other database server **to optimize the code** for execution **on said database appliance**” is a recitation of an intended use in a claim directed to an Apparatus. Such language suggests that the method step be performed but does not actually require the step to be performed because the claimed invention is not directed to a method. As a result, it carries no patentable weight (see MPEP 2106 [R – 3]. II.C subsection c).

As to claim 17, the database server was generated from another database server by modifying the code of the other database server to optimize the code for execution on said database appliance (Nilsen: column 3, lines 60 – 65).

As to claims 3 and 18, the hardware for said database appliance is selected and configured to optimize performance of one or more services to be performed by the database server (Nilsen: column 3, lines 60 – 65).

As to claims 5 and 20, the database server is a special purpose database server, wherein features and configuration of the special purpose operating system are dictated by the special purpose database server and supporting components (Nilsen: column 3, lines 60 – 65), and wherein the special purpose database server is specially adapted

based upon the services required by a specific type of database usage (Nilsen: column 2, lines 15 – 35).

As to claims 6 and 21, the special purpose operating system performs process scheduling based on shares of CPU time (see abstract; Nilsen).

As to claims 7 and 22, a self-configuration module that is capable of performing the steps of detecting an environment in which the database appliance is being used; and configuring the database appliance based upon the detected environment (Nilsen: column 3, lines 60 – 65).

With respect to claims 8 and 23, the special purpose operating system employs a microkernel and an associated service module (Nilsen: column 3, lines 43 – 60).

With respect to claims 9 and 24, Nilsen does not explicitly teach the database server includes a mechanism for reading resource information within an address space of a kernel of the operating system without causing a context switch to the operating system kernel address space as claimed.

Schleipfer discloses claimed database server that includes a mechanism for reading resource information within an address space of a kernel of the operating system without causing a context switch to the operating system kernel address space (Schleipfer: section 3, pages 121 – 122 and page 124, right hand column, lines 32 - 38).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Schleipfer with Nilsen to increase the ease and efficiency of the configuration management task in a distributed computer systems. The ServOS kernel of Schleipfer takes simpler solutions where problems are easier to solve on

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server machines and it further gives the server modules a higher-level OS support (see page 121; Schleipfer).

With respect to claims 11 and 26, Nilsen teaches database appliance is configured with an amount of resources dedicated to computational services that is based upon whether said specific type of database usage is an online transaction processing application (see Figure 1 and column 3, lines 60 – 65; Nilsen).

Nilsen does not explicitly indicate that the database application is a OLTP and that the configuration is done by dedicating more resources to I/O services.

Schleipfer teaches a configuration database similar to the one of Nilsen and that the database application is a OLTP (see sections 4.1 and 4.2 of Schleipfer) and that the configuration is done by dedicating more resources to I/O services (see section 4.6 of Schleipfer).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Schleipfer with Nilsen to increase the ease and efficiency of the configuration management task in a distributed computer systems. The ServOS kernel of Schleipfer takes simpler solutions where problems are easier to solve on server machines and it further gives the server modules a higher-level OS support (see page 121; Schleipfer).

With respect to claims 31 and 33, the step of modifying the general purpose operating system includes adding or removing one or more features to the general purpose operating system, and wherein the one or more features are used to provide



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said set of services to the database server (Schleipfer: page 122, right hand column, line 28 – page 123, left column, line 20).

**5. Claims 4 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsen in view of Schleipfer as applied to claim 1 and 16 above, and further in view of U.S. Patent Number 5,627,994 issued to Hanoach Levy et al. (“Levy”).**

With respect to claims 4 and 19, Nilsen and Schleipfer disclosed a database appliance, comprising: a database server; and a special purpose operating system, generated by modifying a general purpose operating system, whose configuration is dictated based on a set of services required by the database server and further teaches the hardware for said database appliance selection and configuration as discussed above.

Nilsen and Schleipfer do not explicitly teach to optimize a cache-hit ratio experienced by the database appliance as claimed.

Levy discloses claimed optimization of a cache-hit ratio experienced by the database appliance (see abstract, column 5, lines 6 – 18, 47 – 55).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to combine Levy with Nilsen and Schleipfer to provide a method for allocating request streams and memory resources to a cache architecture, in such a way as demonstrably to improve or to optimize system performance, as measured by the hit ratio.

***Allowable Subject Matter***

6. Claims 10 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shahid Al Alam whose telephone number is (571) 272-4030. The examiner can normally be reached on Monday-Thursday 8:00 A.M.- 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Shahid Al Alam  
Primary Examiner  
Art Unit 2162

January 8, 2006